Page 1 of 7

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RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/694,519

DATE: 11/08/2000 TIME: 07:33:13

Input Set : A:\ES.txt

Output Set: N:\CRF3\11082000\1694519.raw

ENTERED

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3 <110> APPLICANT: Isfort, Robert
      4 Sheldon, Russell
      6 <120> TITLE OF INVENTION: Methods for Identifying Compounds for Regulating Muscle Mass or Function
             Using Vasoactive Intestinal Peptide Receptors
      9 <130> FILE REFERENCE: 8311
C--> 11 <140> CURRENT APPLICATION NUMBER: US/09/694,519
C--> 11 <141> CURRENT FILING DATE: 2000-10-23
     11 <160> NUMBER OF SEQ ID NOS: 16
     13 <170> SOFTWARE: PatentIn version 3.0
     1.5 <210> SEQ ID NO: 1
     16 <211> LENGTH: 457
     1.7 <212> TYPE: PRT
     18 <213> ORGANISM: homo sapiens:
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                                          25
     28 Leu Gln Glu Cys Asp Tyr Val Gln Met Ile Glu Val Gln His Lys
     31 Gln Cys Leu Glu Glu Ala Gln Leu Glu Asn Glu Thr Ile Gly Cys Ser
                               55
     34 Lys Met Trp Asp Asn Leu Thr Cys Trp Pro Ala Thr Pro Arg Gly Gln
                          70
     37\ \text{Val} Val Val Leu Ala Cys Pro Leu Ile Phe Lys Leu Phe Ser Ser Ile
                     85
                                             90
     40 Gln Gly Arg Asp Val Ser Arg Ser Cys Thr Asp Glu Gly Trp Thr His 41 100 105 110
     43 Leu Glu Pro Gly Pro Tyr Pro Ile Ala Cys Gly Leu Asp Asp Lys Ala
44 115 120 125
     46 Ala Ser \overline{\text{Leu}} Asp Glu Gln Gln Thr Met Phe Tyr Gly Ser Val Lys Thr 47 130 135 140
     49 Gly Tyr Thr Ile Gly Tyr Gly Leu Ser Leu Ala Thr Leu Leu Val Ala 50 145 \phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}
     52 Thr Ala Ile Leu Ser Leu Phe Arg Lys Leu His Cys Thr Arg Asn Tyr
                       1.65
                                             1.70
     55 Ile His Met His Leu Phe Ile Ser Phe Ile Leu Arg Ala Ala Ala Val
         180
                                        1.85
     58 Phe Ile Lys Asp Leu Ala Leu Phe Asp Ser Gly Glu Ser Asp Gln Cys 59 200 205
     61 Ser Glu Gly Ser Val Gly Cys Lys Ala Ala Met Val Phe Phe Gln Tyr
                                 215
     64 Cys Val Met Ala Asn Phe Phe Trp Leu Leu Val Glu Gly Leu Tyr Leu
     65 225 230
                                           235
     67 Tyr Thr Leu Leu Ala Val Ser Phe Phe Ser Glu Arg Lys Tyr Phe Trp 68 \phantom{\bigg|}245\phantom{\bigg|}250\phantom{\bigg|}25
     70 Gly Tyr lle Leu Ile Gly Trp Gly Val Pro Ser Thr Phe Thr Met Val
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```
73 Trp Thr Ile Ala Arg Ile His Phe Glu Asp Tyr Gly Cys Trp Asp Thr
74 275 280 285
76 Ile Asn Ser Ser Leu Trp Trp Ile 11e Lys Gly Pro Ile Leu Thr Ser 77 290 295 300
79 Tle Leu Val. Asn Phe Ile Leu Phe Ile Cys Ile Ile Arg Ile Leu Leu 80\ 305 310 315 320
82 Gln Lys Leu Arg Pro Pro Asp Ile Arg Lys Ser Asp Ser Ser Pro Tyr 83 $325$
85 Ser Arg Leu Ala Arg Ser Thr Leu Leu Leu 11e Pro Leu Phe Gly Val 86 $340
88 His Tyr Ile Met Phe Ala Phe Phe Pro Asp Asn Phe Lys Pro Glu Val 89 $355$ 360 365
91 Lys Met Val Phe Glu Leu Val Val Gly Ser Phe Gln Gly Phe Val Val 92 370 375 380
97 Arg Lys Trp Arg Trp His Leu Gln Gly Val Leu Gly Trp Asn Pro 98 405 410 415
100 Lys Tyr Arg His Pro Ser Gly Gly Ser Asn Gly Ala Thr Cys Ser Thr 101 420 425 430
103 Gln Val Ser Met Leu Thr Arg Val Ser Pro Gl\gamma Ala Arg Arg Ser Ser 104 435 440 445
106 Ser Phe Gln Ala Glu Val Ser Leu Val
107 450
109 <210> SEQ TD NO: 2
11.0 <21.1> LENGTH: 460
11.1 <21.2> TYPE: PRT
112 <213> ORGANISM: homo sapiens;
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119 Gly Ala Leu Ala Trp Ala Leu Gly Pro Ala Gly Gly Gln Ala Ala Arg 120 \phantom{\bigg|}25\phantom{\bigg|}30\phantom{\bigg|}
122 Leu Gln Glu Glu Cys Asp Tyr Val Gln Met Ile Glu Val Gln His Lys 123 \phantom{-}35\phantom{+}40\phantom{+}40\phantom{+}45\phantom{+}
125 Gln Cys Leu Glu Glu Ala Gln Leu Glu Asn Glu Thr Ile Gly Cys Ser
126 50 55 60
128 Lys Met Trp Asp Asn Leu Thr Cys Trp Pro Ala Thr Pro Arg Gly Gln 129 65 70 75 80
131 Val Val Val Leu Ala Cys Pro Leu Ile Phe Lys Leu Phe Ser Ser Ile 132 85 90 95
134 Gln Gly Arg Asn Val Ser Arg Ser Cys Thr Asp Glu Gly Trp Thr His 135 $100$
137 Leu Glu Pro Gly Pro Tyr Pro The Ala Cys Gly Leu Asp Asp Lys Ala 138 \phantom{\bigg|}115\phantom{\bigg|}125\phantom{\bigg|}
140 Ala Ser Leu Asp Glu Gln Gln Thr Met Phe Tyr Gly Ser Val Lys Thr 141 \phantom{\bigg|}130\phantom{\bigg|}135\phantom{\bigg|}135\phantom{\bigg|}140\phantom{\bigg|}
143 Gly Tyr Thr Ile Gly Tyr Gly Leu Ser Leu Ala Thr Leu Leu Val Ala
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146 Thr Alá Ile Leu Ser Leu Phe Arg Lys Leu His Cys Thr Arg Asn Tyr
147 165 170 175
149 Tle His Met His Leu Phe Ile Ser Phe Tle Leu Arg Ala Ala Ala Val. 150 $180\ 
152 Phe 11e Lys Asp Leu Ala Leu Phe Asp Ser Gly Glu Ser Asp Gln Cys 153 200 205
155 Ser Glu Gly Ser Val Gly Cys Lys Ala Ala Met Val Phe Phe Gln Tyr
156 210
                   215
158 Cys Val Met Ala As<br/>n Phe Phe Trp Leu Leu Val Glu Gly Leu Tyr Leu 159 225 <br/> 230 235 240
161 Tyr Thr Leu Leu Ala Val Ser Phe Phe Ser Glu Arg Lys Tyr Phe Trp
162 245 250 255
1.64 Gly Tyr Ile Leu Ile Gly Trp Gly Val Pro Ser Thr Phe Thr Met Val 165 260 265 270
167 Trp Thr Ile Ala Arg Ile His Phe Glu Asp Tyr Gly Leu Leu Arg Cys
168 275 280
                                              285
173 Leu Thr Ser Ile Leu Val Asn Phe Ile Leu Phe Ile Cys Ile Ile Arg 174 305 310 \hspace{1.5cm} 315 \hspace{1.5cm} 320
176 Ile Leu Leu Gln Lys Leu Arg Pro Pro Asp Ile Arg Lys Ser Asp Ser 177 325 330 335
179 Ser Pro Tyr Ser Arg Leu Ala Arg Ser Thr Leu Leu Leu Ile Pro Leu 180 \phantom{\bigg|}340\phantom{\bigg|} 345 \phantom{\bigg|}345\phantom{\bigg|}
182 Phe Gly Val His Tyr Ile Met Phe Ala Phe Phe Pro Asp Asn Phe Lys
183 355 360 365
185 Pro Glu Val Lys Met Val Phe Glu Leu Val Val Gly Ser Phe Gln Gly
186 370 375
                                         380
188 Phe Val Val Ala Ile Leu Tyr Cys Phe Leu Asn Gly Glu Val Gln Ala 189 385 390 \hspace{1.5cm} 390 \hspace{1.5cm} 395 \hspace{1.5cm} 400
191 Glu Leu Arg Arg Lys Trp Arg Arg Trp His Leu Gln Gly Val Leu Gly 192 405 415
194 Trp Asn Pro Lys Tyr Arg His Pro Ser Gly Gly Ser Asn Gly Ala Thr 195 420 425 430
1.97 Cys Ser Thr Gln Val Ser Met Leu Thr Arg Val Ser Pro Gly Ala Arg
1.98 435 440 445
200 Arg Ser Ser Ser Phe Gln Ala Glu Val Ser Leu Val
201 450
                   455
203 <210> SEQ ID NO: 3
204 <211> LENGTH: 459
205 <212> TYPE: PRT
206 <213> ORGANISM: rattus norvegicus;
208 <400> SEQUENCE: 3
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211 1 5
                                       1.0
213 Gly Ala Leu Ala Cys Ala Leu Arg Pro Ala Gly Ser Gln Ala Ala Ser 214 \phantom{\bigg|}20\phantom{\bigg|}25\phantom{\bigg|}25\phantom{\bigg|}30\phantom{\bigg|}
216 Pro Gln His Glu Cys Glu Tyr Leu Gln Leu Ile Glu Ile Gln Arg Gln
```

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RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/694,519

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Input Set : A:\ES.txt
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217			35					40					45			
219	Gln	Cys	Leu	Glu	Glu	Ala	Gln	Leu	G1.u	Asn	G.l u	Thr	Thr	Gly	Cys	ser
220		50					55					60				
222	Lys	Иеt	Trp	Asp	Asn	Leu	Thr	Cys	Trp	Pro	Thr	Thr	Pro	Arg	Gly	G.l.n
223	65					70					75					80
225	Ala	Val.	٧al	Leu	Asp	Cys	Pro	Leu	11e	Phe	Gln	Leu	Phe	A.l.a	Pro	Tle
226					85					90					95	
228	His	Gly	Tyr	Asn	11 l.e	ser	Arg	Ser	Cys	Thr	Glu	Gl.u	Gly	Trp	Ser	G1n
229				1.00					105					11.0		
231	Leu	Glu	Pro	Gly	Pro	Tyr	H i.s	Ile	Ala	Cys	Gly	Leu	Asn	Asp	Arg	Ala
232			115					120					125			
234	Ser	Ser	Leu	Asp	G l.u	Gln	G.l.n	Gln	Thr	Lys	Phe	Tyr	Asn	Thr	Val	Lys
235		130					135					140				
	Thr	Gly	Tyr	Thr	He	-	Tyr	ser	Leu	Ser	Leu	Ala	ser	Leu	Leu	Val
238	145					150					155					160
	Ala	Met	Ala	Lle		ser	Leu	Phe	Arg	_	Leu	His	Суѕ	Thr		Asn
241					165					170					175	
	Tyr	Ile	His		llis	Leu	Phe	Met		Phe	Ile	Leu	Arg		Thr	Ala
244	_		_	180					1.85					190		
	Val	Phe		Lys	Asp	Met	Ala		Phe	Asn	Ser	Gly		Ile	Asp	His
247		_	195					200					205			
	Cys	Ser	Glu	A I.a	ser	Val	_	Cys	Lys	A.La	Ala		Val	Phe	Phe	GLn
250	m	210	· · · · · · · · · · · · · · · · · · ·		3.1-	.	215	n.b				220	a 1	0.1		
		Cys	val.	мес	Ата		Pne	Pne	Trp	Leu		Val	GLu	GIY	Leu	-
	225	m	rnls ss	tan	T 0	230	Tro I	Can	Dho	Dha	235	<i>.</i>		r	m	240
256	neu	Tyr	1.11.0	теп	245	F.La	vaı	Set	Pile	250	ser	GIU	Arg	гÃг	255	ые
	Orn	Gly	Путра	rlo		rlo	014	Tro	Clar		Dro	cor	Ma I	Dho		mb c
259	ттЪ	G I. y	1 Y 1	260	ueu	1.1.6	GLY	ıτρ	265	va ı.	F-1. O	5e.r		270	1.1.6	1111.
	ΙΙω	Trp	mb e		Val	Arror	Τlω	Пите		C1 a	Aen	Dha			n'ro	Acn
262	111.	116	275	VUL	vul	nr 9	11.0	280	1.110	OLU	пэр	rne	285	Cys	тгр	rab
	Thr	Tle		Asn	Ser	Ser	Len		Trn	TIE	TIA	Lvs		Pro	Tle	T.e.u
265	2 *****	290	2.20			001	295	11/5				300	111.0		.1.1.0	500
	Leu	Ser	He	Leu	Val	Asn		Va 1	Len	Phe	Tle		Tle	Tle	Ara	Tle
268	305					31.0					315	-,-			- 1.2. 9	320
270	Leu	Val	Gln	Lys	Leu	Arq	Pro	Pro	Asp	Ile	Gly	Lys	Asn	Asp	Ser	
271				•	325	•				330	•	•			335	
273	Pro	Tyr	Ser	Arq	Leu	Ala	Lys	Ser	Thr	Leu	Len	Leu	11e	Pro	Leu	Phe
274		-		340					345					350		
276	Gly	Ile	His	Tyr	Val	Met	Phe	Ala	Phe	Phe	P.ro	Asp	Asn	Phe	Lys	Ala
277			355					360					365		•	
279	Gln	Val	Lys	Met	Val	Phe	Glu	Leu	'Val	Val.	GLy	ser	Phe	Gln	Gly	Phe
280		370					375					380				
282	Val	Val	Ala	l'le	Leu	Туr	Cys	Phe	Leu	Asn	Gly	Glu	Val	Gln	Ala	Glu
283	385					390					395					400
285	Leu	Arg	Arg	Lys	Trp	Arg	Arg	Trp	His	Leu	GLn	Gly	Val	Leu	G.l.y	Trp
286					405					410					415	
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289				420					425					430		

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 DATE: 11/08/2000

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 US/09/694,519
 TIME: 07:33:13

Input Set : A:\ES.txt

Output Set: N:\CRF3\11082000\1694519.raw

291 Ser Thr Gln Val Ser Met Leu Thr Arg Val Ser Pro Ser Ala Arg Arg 292 435 440 294 Ser Ser Ser Phe Gln Ala Glu Val Ser Leu Val 295 450 455 297 <210> SEQ ID NO: 4 298 <211> LENGTH: 459 299 <212> TYPE: PRT 300 <213> ORGANISM: mus musculus; 302 <400> SEQUENCE: 4 304 Met Arg Pro Pro Ser Leu Pro Pro Ala Arg Trp Leu Cys Val Leu Ala 305 l $$ 5 $$ 10 $$ 15 307 Gly Ala Leu Ala Cys Ala Leu Gly Pro Ala Gly Ser Arg Ala Ala Ser 308 202025 310 Pro His Gln Glu Cys Glu Tyr Leu Gln Met Ile Glu Lys Gin Arg Gln 311 35 40 45313 Gln Cys Leu Glu Glu Ala Gln Leu Glu Asn Lys Thr Thr Gly Cys Ser 314 50 55 316 Lys Met Trp Asp Asn Leu Thr Cys Trp Pro Thr Thr Pro Trp Gly Gln 31.7 65 70 70 70 75 80319 Val Val Val Leu Asp Cys Pro Leu Ile Phe Gln Leu Phe Ser Pro Ile 320 95 322 His Gly Tyr Asn Ile Ser Arg Asn Cys Thr Glu Glu Gly Trp Ser Gln 323 100 105 110 325 Leu Glu Pro Gly Pro Tyr His Ile Ala Cys Gly Leu Asn Asp Arg Ala 326 $$ 115 $$ 120 $$ 125 328 Ser Ser Met Asp Glu Gln Gln Gln Thr Glu Phe Tyr Asp Ala Val Lys 329 130130135135140 331 Thr Gly Tyr Thr Ile Gly Tyr Ser Leu Ser Leu Ala Ser Leu Leu Val 332 145 150 155 160 334 Ala Met Ala Ile Leu Ser Leu Phe Arg Lys Leu His Cys Thr Arg Asn 335 165170170175 337 Tyr Tle His Met His Leu Phe Met Ser Phe Tle Leu Arg Ala Thr Ala 338 $$180\$ 340 Val Phe Ile Lys Asp Met Ala Leu Phe Asn Asn Gly Glu Thr Asp His 341 195 200 343 Cys Ser Glu Ala Ser Val Ser Cys Lys Ala Ala Val Val Phe Phe Gln 344 210 215 220 346 Tyr Cys Val Met Ala Asn Phe Phe Trp Leu Leu Val Glu Gly Leu Tyr 347 225 230 230 230 235 240 . 349 Leu His Thr Leu Leu Ala Val Ser Phe Phe Ser Glu Arg Lys Tyr Phe 352 Trp Gly Tyr Ile Leu Ile Gly Trp Gly Val Pro Ser Val Phe Ile Met 353 260 265 270 355 lle Trp Thr Ile Val Arg Ile His Phe Glu Asp Phe Gly Cys Trp Asp 356 275280285 358 Thr fle Ile Asn Ser Ser Leu Trp Trp Ile Ile Lys Gly Pro Ile Leu 359 290295 295 300 361 Ile Ser Ile Leu Val Asn Phe Ile Leu Phe Ile Cys Ile Ile Arg Ile 362 305 310

VERIFICATION SUMMARY

PATENT APPLICATION: US/09/694,519

DATE: 11/08/2000 TIME: 07:33:14

Input Set : A:\ES.txt
Output Set: N:\CRF3\11082000\1694519.raw

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